

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
18 January 2001 (18.01.2001)

PCT

(10) International Publication Number  
**WO 01/03569 A2**

(51) International Patent Classification<sup>7</sup>: **A61B**

(21) International Application Number: **PCT/IL00/00403**

(22) International Filing Date: **9 July 2000 (09.07.2000)**

(25) Filing Language: **English**

(26) Publication Language: **English**

(30) Priority Data:  
**130939 14 July 1999 (14.07.1999) IL**

(71) Applicant (for all designated States except US): **ITAMAR MEDICAL (CM) 1997 LTD. [IL/IL]; 2 Haeshel Street, Industrial Park, 38900 Caesarea (IL).**

(72) Inventor; and

(75) Inventor/Applicant (for US only): **SCHNALL, Robert, P. [IL/IL]; 5 Hadafna Street, 27201 Kiryat Bialik (IL).**

(74) Agent: **EHRlich, Gal; G.E. Ehrlich (1995) Ltd., 28 Bezalel Street, 52521 Ramat Gan (IL).**

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— *Without international search report and to be republished upon receipt of that report.*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **PROBE DEVICES PARTICULARLY USEFUL FOR NON-INVASIVE DETECTION OF MEDICAL CONDITIONS**

(57) Abstract: A probe for application to a body part, such as a finger or toe, of a patient to detect a change in the physiological condition of the patient includes: a housing having at least three contiguous but separate sections, namely: a distal end section at its distal tip, a proximal end section at its opposite end, and at least one middle section between the end sections. A pressure field is applied to the portion of the body part received within at least the distal end section and the middle section of the housing; and a sensor senses changes in the body part received within the middle section of the housing.

**WO 01/03569 A2**